

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Original): A sandwich structure (2) comprising a core (20) and two facings (21, 22) between which the core is placed, the core (20) being formed from a mineral-fiber-based product (1) obtained by a process involving internal centrifugation combined with attenuation by a high-temperature gas stream, characterized in that the mineral fibers are crimped.

Claim 2 (Currently Amended): The sandwich structure as claimed in claim 1 ~~or 2~~, characterized in that the fiber distribution over a section substantially parallel to the surface of the facings (21, 22) has a substantially V-shaped profile.

Claim 3 (Currently Amended): The sandwich structure as claimed in claim 1 ~~one of~~ ~~claims 1 to 3~~, characterized in that the core comprises a plurality of juxtaposed lamellae (25) that extend along the main extension of the facings, the lamellae being formed from the product (1) based on crimped mineral fibers.

Claim 4 (Original): The structure as claimed in claim 4, characterized in that the V-shaped profile of the fiber distribution extends over the entire width of the lamellae and the tips of the Vs are substantially aligned.

Claim 5 (Currently Amended): The sandwich structure as claimed in claim 1 ~~any one~~ ~~of the preceding claims~~, characterized in that its density is at most equal to 80 kg/m^3 ; ~~preferably between 50 and 70 kg/m³.~~

Claim 6 (Currently Amended): The sandwich structure as claimed in claim 1 ~~any one of the preceding claims~~, characterized in that it has a compressive strength of at least 60 kPa.

Claim 7 (Currently Amended): The sandwich structure as claimed in claim 1 ~~any one of the preceding claims~~, characterized in that it has a shear strength of at least 60 kPa.

Claim 8 (Currently Amended): The sandwich structure as claimed in claim 1 ~~any one of the preceding claims~~, characterized in that the mineral fibers are obtained from the following glass composition in proportions by weight :

SiO ₂	57 to 70%
Al ₂ O ₃	0 to 5%
CaO	5 to 10%
MgO	0 to 5%
Na ₂ O + K ₂ O	13 to 18%
B ₂ O ₃	2 to 12%
F	0 to 1.5%
P ₂ O ₅	0 to 4%
Impurities	< 2%

and contain more than 0.1% by weight of phosphorus pentoxide when the weight percentage of alumina is equal to or greater than 1%.

Claim 9 (Currently Amended): The sandwich structure as claimed in claim 1 ~~any one of claims 1 to 7~~, characterized in that the mineral fibers are obtained from the following glass composition in mol% :

SiO ₂	55-70
B ₂ O ₃	0-5
Al ₂ O ₃	0-3
TiO ₂	0-6
Iron oxides	0-2
MgO	0-5
CaO	8-24
Na ₂ O	10-20
K ₂ O	0-5
Fluoride	0-2

Claim 10 (Currently Amended): The sandwich structure as claimed in claim 1 ~~any one of claims 1 to 7~~, characterized in that the mineral fibers are obtained from the following glass composition in percentages by weight, the alumina content preferably being greater than or equal to 16% by weight :

SiO ₂	35-60 %
Al ₂ O ₃	12-27 %
CaO	0-35 %
MgO	0-30 %
Na ₂ O	0-17 %
K ₂ O	0-17 %
R ₂ O (Na ₂ O + K ₂ O)	10-17 %
P ₂ O ₅	0-5 %
Fe ₂ O ₃	0-20 %
B ₂ O ₃	0-8 %
TiO ₂	0-3%

Claim 11 (Currently Amended): The sandwich structure as claimed in claim 1 ~~any one of the preceding claims~~, characterized in that the facings (21, 22) are made of sheet metal, ~~possibly perforated~~.

Claim 12 (Canceled).

Claim 13 (Currently Amended): A process for manufacturing a structure of claim 1 ~~as claimed in any one of the preceding claims~~, characterized in that it consists in:

- delivering, on a plane (P), the product (1) based on mineral fibers obtained by an internal centrifugation process;
- crimping the product (1);
- cutting the crimped product into lamellae (25), ~~preferably along the greatest extent of the crimped product~~;
- turning the lamellae (25) through 90° with respect to the plane (P); and
- juxtaposing the lamella and assembling them between the two facings (21, 22).

Claim 14 (Currently Amended): The process as claimed in claim 13, characterized in that the fibers of the product (1) are crimped by means of a crimping unit (31) comprising at least a first pair (310, 311) and a second pair (312, 313) of conveyors between which the product runs in order to be compressed both longitudinally and in its thickness, which conveyors have speeds V1 and V2 respectively, the ratio of the speeds $R = V1/V2$ being greater than or equal to 3, ~~and preferably equal to 3.5~~, and also compression means (315) that reduce the product to its final thickness e, the H/e ratio being greater than or equal to 1.2, ~~and preferably equal to 1.6~~, H corresponding to the height between the conveyors of the second pair (312, 313).

Claim 15 (Currently Amended): A method of construction using at least one architectural insulation element, of the roof, partition or wall-cladding panel type, characterized in that the architectural insulation element is formed by assembling sandwich structures as claimed in ~~any one of claims 1 to 12~~ claim 1.

Claim 16 (Original): The method of construction as claimed in claim 15, characterized in that the sandwich structures are butted and joined together by interlocking of their ends (23, 24), which have mutually cooperating shapes.

Claim 17 (New): The sandwich structure as claimed in claim 2, characterized in that it has a compressive strength of at least 60 kPa.

Claim 18 (New): The sandwich structure as claimed in claim 3, characterized in that it has a compressive strength of at least 60 kPa.

Claim 19 (New): The sandwich structure as claimed in claim 4, characterized in that it has a compressive strength of at least 60 kPa.

Claim 20 (New): The sandwich structure as claimed in claim 5, characterized in that it has a compressive strength of at least 60 kPa.

Claim 21 (New): The sandwich structure as claimed in claim 2, characterized in that it has a shear strength of at least 60 kPa.